

**ADEM GENERAL PERMIT RATIONALE  
PETROLEUM PRODUCTS  
ALG340000**

**DATE: March 24, 2016**

**PREPARED BY: Lee Warren**

**LOCATION: ALL WATERS OF THE STATE NOT DESIGNATED OUTSTANDING  
NATIONAL RESOURCE WATER OR OUTSTANDING ALABAMA WATER**

PERMIT IS REISSUANCE DUE TO EXPIRATION

**DISCUSSION:**

The Department is proposing to reissue NPDES General Permit ALG340000. The permit is intended to cover storm water, hydrostatic test water, and groundwater discharges resulting from the storage, handling, transportation, spill clean-up, contaminated groundwater and/or soil remediation and investigation, or other operations involving petroleum and its derivatives and exterior vehicle washwater.

**NOTE: The parameters for each of the following discharges, i.e. DSN#...., are proposed to be continued in this permit, as in the previous permit, unless otherwise noted.**

**DSN001** Groundwater and/or storm water incidental to groundwater cleanup operations which have been contaminated with automotive gasoline, aviation fuel, jet fuel, or diesel fuel. This outfall requires monitoring and/or limitations for the following parameters:

Flow Flow is to be measured in gallons per day. Monitoring frequency is 1/month.

pH pH limitations are 6.0 daily minimum and 8.5 daily maximum for waste water discharges as set forth in ADEM Administrative Code R. 335-6-10. Monitoring frequency is 1/month.

Benzene (Facilities that discharge into a body of water which is designated as a public water supply or within 24 hours travel time to PWS)

The Department is proposing a daily maximum limit of 1.12 µg/l for benzene. This limit is based on the benzene human health (consumption of fish and water) standard for streams designated as public water supply as set forth at ADEM Administrative Code R. 335-6-10. A limit of 1.12 µg/l for benzene should be protective of water quality. Monitoring frequency is 1/ month.

Benzene (All other areas)

The Department is proposing a limit of 15.5 µg/l for benzene. The human health (consumption fish only) standard for benzene is now 15.5 µg/l and should be protective of water quality. Monitoring frequency is 1/ month.

Ethylbenzene (Facilities that discharge into a body of water which is designated as a public water supply or within 24 hours travel time to PWS)

The Department is proposing a daily maximum limit of 448 µg/l for ethylbenzene. This limit is based on the ethylbenzene human health (consumption of fish and water) standard for streams designated as public water supply as set forth at ADEM Administrative Code R. 335-6-10. A limit of 448 µg/l for ethylbenzene should be protective of water quality. Monitoring frequency is 1/ month.

Ethylbenzene (All other areas)

The Department is proposing a limit of 1,244 µg/l for ethylbenzene. The human health (consumption fish only) standard for ethylbenzene is 1,244 µg/l and should be protective of water quality. Monitoring frequency is 1/ month.

Toluene (Facilities that discharge into a body of water which is designated as a public water supply or within 24 hours travel time to PWS)

The Department is proposing a daily maximum limit of 1,206 µg/l for toluene. This limit is based on the toluene human health (consumption of fish and water) standard for streams designated as public water supply as set forth at ADEM Administrative Code R. 335-6-10. A limit of 1,206 µg/l for toluene should be protective of water quality. Monitoring frequency is 1/ month.

Toluene (All other areas)

The Department is proposing a limit of 8,723 µg/l for toluene. The human health (consumption fish only) standard for toluene is 8,723 µg/l and should be protective of water quality. Monitoring frequency is 1/ month.

Xylene

The results of xylene will be used to track the effectiveness of the permittee's BMP plan. Monitoring frequency is 1/ month.

Total Recoverable Lead

The Department is proposing an effluent lead daily maximum limit of 2.5 µg/l total recoverable lead. This limit is based on the chronic water quality standard set forth in ADEM Administrative Code R. 335-6-10-.07-4.(ii) . Monitoring for lead will be required only if contamination is associated with leaded fuels or if required by the Department. Monitoring frequency is 1/month.

#### Naphthalene

The naphthalene daily maximum limit is 620 µg/l. In the absence of state water quality criteria for naphthalene, this limit is based on information contained in the EPA Quality Criteria for Water 1986 Document (EPA 440/5-86-001) May 1, 1986. This limitation has also been shown to be protective of water quality. While naphthalene is insoluble in water it is soluble in both benzene and toluene. Therefore, if benzene is sufficiently removed using BAT technology, the naphthalene should also be removed. Monitoring for naphthalene will only be required at facilities which handle aviation fuel, jet fuel or diesel fuel. Monitoring frequency is 1/month.

#### Oil and Grease

The oil and grease daily maximum limit is 15 mg/l. This limit has been demonstrated through experience by the Department to be best conventional technology (BCT) to be achievable by gravity oil/water separators; however, to further ensure adequate oil removal occurs, a requirement for no oil sheen is also imposed. Monitoring frequency is 1/month.

#### MTBE (methyl tertiary butyl ether)

MTBE is an oxygenate that is added to fuel and is found at many petroleum release sites. The results of MTBE monitoring will be used to track the effectiveness of the permittee's remediation as well as the effectiveness of their BMP plan and equipment performance. Monitoring frequency is 1/month.

**DSN002** Storm water runoff from petroleum storage and fueling areas. This outfall requires monitoring and/or limitations for the following parameters:

#### Rainfall

The amount of rainfall occurring during the monitored rain event is to be reported in inches. Monitoring frequency is 1/quarter.

pH pH limits are not imposed for storm water discharges as the permittee wouldn't be expected to significantly impact the storm water. Therefore, only monitoring is required. Monitoring frequency is 1/quarter.

Benzene See DSN001. Monitoring frequency is 1/quarter.

Ethylbenzene See DSN001. Monitoring frequency is 1/quarter.

Toluene See DSN001. Monitoring frequency is 1/quarter.

Xylene See DSN001. Monitoring frequency is 1/quarter.

#### Naphthalene

See DSN001. Monitoring frequency is 1/quarter.

#### Oil and Grease

See DSN001. Monitoring frequency is 1/quarter.

#### MTBE (Methyl Tertiary Butyl Ether)

See DSN001. Monitoring frequency is 1/quarter.

**DSN004** Discharge limitations and monitoring requirements for uncontaminated storm water from equipment maintenance and storage and petroleum storage, fueling, and handling areas. This outfall requires monitoring and/or limitations for the following parameters:

For facilities to have only DSN004, they must have a BMP Plan in place which addresses the fueling area, they must have a valid SPCC Plan, if required by 40 CFR Part 112, and they must be determined by the Department to not have a significant potential for environmental impact.

**DSN005** Vehicle and equipment exterior washing operations (excluding commercial car washes) that DO NOT use solvents. This outfall requires monitoring and/or limitations for the following parameters:

Flow See DSN001. Monitoring frequency is 1/week.

pH See DSN001. Monitoring frequency is 1/month.

Oil and Grease

See DSN001. Monitoring frequency is 1/month.

Phosphorus, Total

Excessive phosphorus can cause eutrophication in a receiving stream. Based on best professional judgment (BPJ), a daily maximum limit of 1.0 mg/l of phosphorus is achievable and should prevent or minimize eutrophication in the receiving stream. The 1.0 mg/l limit should also minimize the use of phosphorus based detergents. The limit was taken from "Process Design Manual for Phosphorus Removal" EPA 625/1-76-001a. Monitoring frequency is 1/month.

Total Suspended Solids (TSS)

The daily maximum limit for TSS is 50 mg/l. This limit is based on BPJ and is considered achievable using BMPs. Monitoring frequency is 1/month.

**DSN007** Hydrostatic test water generated on site. This outfall requires monitoring and/or limitations for the following parameters:

Flow See DSN001. Monitoring frequency is 1/month.

pH See DSN001. Monitoring frequency is 1/month.

Total Recoverable Lead

See DSN001. Monitoring frequency is 1/month.

Benzene See DSN001. Monitoring frequency is 1/month.

Ethylbenzene See DSN001. Monitoring frequency is 1/month.

Toluene See DSN001. Monitoring frequency is 1/month.

Xylene See DSN001. Monitoring frequency is 1/month.

Naphthalene

See DSN001. Monitoring frequency is 1/month.

Oil and Grease

See DSN001. Monitoring frequency is 1/month.

Total Residual Chlorine

The daily maximum and monthly average limits are 0.019 mg/l and 0.011 mg/l. EPA's suggested water quality criteria for total residual chlorine of 0.011 mg/l for chronic toxicity and 0.019 mg/l for acute toxicity are being used as the monthly average and maximum values. Monitoring frequency is 1/month.

In accordance with a letter dated August 11, 1998 from EPA Headquarters and a 1991 memorandum from EPA Region 4's Environmental Services Division (ESD), due to testing and method detection limitations, a Total Residual Chlorine measurement below 0.05 mg/L shall be considered below detection for compliance purposes.

MTBE (Methyl Tertiary Butyl Ether)

See DSN001. Monitoring frequency is 1/month.

Industrial General Permits may now cover discharges to a treasured Alabama Lake (TAL). Currently, Lake Martin is the only lake designated as a TAL. In the past permit cycle, industrial discharges to treasured Alabama Lakes were not covered under the General Permit. Now instead of excluding all such discharges from Industrial General Permit coverage, it will be based on a case by case review. However, the Department may still require certain discharges to a treasured lake to have coverage under an Individual NPDES Permit.